

The Ohio Journal of Science

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The Ohio Journal of Science

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CENTENNIAL ANNUAL MEETING The Ohio Academy of Science Hosted by The Ohio State University April 26-28, 1991

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April Program Abstracts issue of *The Ohio Journal of Science*
edited by Lynn Edward Elfner.

Cover: Reading Room of Orton Memorial Library of Geology,
The Ohio State University. Photograph by L.E. Elfner.

Registration

Registration is required for **ALL** meeting attendees. Although on-site registration will be available at a higher rate, meals cannot be guaranteed after **April 12, 1991**.

To assure reservations for meals, registrations must be received by The Ohio State University by April 12, 1991.

Use Registration Form on last page. Please send the completed form and fees (**payable to The Ohio State University**) by **April 12, 1991** to:

The Ohio Academy of Science
Centennial Annual Meeting
Department of Conferences & Institutes
P.O. Box 2701
Columbus, OH 43216-2701.

An acknowledgement and detailed information on parking will be sent to those who register by April 12, 1991.

For further information, please call (614) 292-4230. FAX (614) 292-0492.

Friday, April 26, 1991

On-site registration

8:00 AM - 10:00 AM for morning symposia
12:00 M - 2:00 PM for afternoon symposia

On-site registration is possible by check, VISA or MASTERCARD at each symposium room. Full service registration sites will be in Kottman Hall (AM & PM), Upham Hall (AM & PM), and Hagerty Hall (PM only).

Saturday, April 27, 1991

8:00 AM - 3:00 PM
Lobby of University Hall
230 North Oval Mall

Parking

The Ohio State University is a large and complex campus. Plan to **ARRIVE EARLY** to find parking and the appropriate building. Parking regulations are **STRONGLY** enforced.

Friday, April 26, 1991

ARRIVE EARLY. \$3.00 per car all day rate (no in-and-out privileges) at Arps Garage (1945 High Street), 9th Avenue Garage (between Belmont and Neil Avenue),

the South Medical Garage (on 10th Avenue at Cannon Drive), and the Ohio Union Garage (1739 North High Street). Tell the attendant that you are attending The Ohio Academy of Science meeting.

For those attending symposia in Kottman Hall or in the Agricultural Engineering building you may purchase (\$1.40) a Guest "C" lot pass at the registration table in the lobby of Kottman Hall, 2021 Coffey Road. For these symposia, you may park in any of the "C" lots with the pass on the agricultural campus. If these "C" lots are full, use The Ohio Academy of Science designated area in the southeast lot on the far West Campus. Then take a free campus bus to the stop near Kottman Hall, and pay the \$1.40 fee at the registration table in Kottman Hall.

Please **DO NOT** USE "A" or "B" lots.

Saturday, April 27, 1991

ARRIVE EARLY. Free parking at any surface lot or street on campus. NOTE: heavy traffic expected from football game.

Further details will be sent to those who register by the April 12th deadline.

Meals

Lunches on your own in the Drake Union, the Ohio Union or at nearby restaurants on Olentangy River Road or High Street.

Friday, April 26, 1991

Centennial Awards Dinner - \$25
(Reservations required by April 12, 1991)

Saturday, April, 1991

Annual Meeting Banquet - \$25
(Reservations required by April 12, 1991)

Housing

Please contact hotels and motels directly. The Friday, April 26th Awards Dinner and the Saturday, April 27th Annual Meeting Banquet will be in the Holiday Inn on the Lane.

Holiday Inn on the Lane	Cross Country Inn - South
328 W. Lane Avenue	1445 Olentangy River Road
Columbus, OH 43201	Columbus, OH 43212
(614) 294-4848	(614) 291-2983

Ramada University Hotel	Days Inn
3160 Olentangy River Rd.	3232 Olentangy River Rd.
Columbus, OH 43202	Columbus, OH 43202
(614) 267-7421	(614) 261-7141

Parke University Hotel Knights Inn
3025 Olentangy River Rd. 3160 Olentangy River Road
Columbus, OH 43202 Columbus, OH 43202
(614) 267-1111 (614) 261-0523

Fawcett Center Olentangy Inn
2400 Olentangy River Rd. 1299 Olentangy River Road
Columbus, OH 43210 Columbus, OH 43212
(614) 292-1342 (614) 294-5211

Cross Country Inn North Red Roof Inn
3246 Olentangy River Rd. 441 Ackerman Road
Columbus, OH 43202 Columbus, OH 43202
(614) 267-4646 (614) 267-9941

General Schedule

Friday, April 26, 1991

9:00 AM - 5:00 PM
Centennial Symposia - See abstracts for locations

6:00 PM
Centennial Awards Reception and Dinner
(Reservations required by April 12, 1991)
Holiday Inn on the Lane
328 W. Lane Avenue

Saturday, April 27, 1991

8:00 AM - 3:00 PM
Registration in Lobby of University Hall

9:00 AM - 4:30 PM
Poster Session in Lobby of University Hall

9:00 AM - 11:00 AM
Morning Technical Section Paper Presentations

11:15 AM
All Academy Lecture
Independence Hall Auditorium
1923 Neil Avenue Mall

Light: Its Curative Powers

Martha Kreimer-Birnbaum, Ph.D.
President
The Ohio Academy of Science

Dr. Martha Kreimer-Birnbaum, the 1990-91 President of The Ohio Academy of Science, is Director of Research at St. Vincent Medical Center and Adjunct Professor in the Department of Biochemistry and Molecular Biology at The Medical College of Ohio in Toledo, Ohio. She received a B.S. in chemistry, an M.S. in organic chemistry, an M.S. in biochemistry, and a Ph.D. in

biochemistry from the National University of Buenos Aires, Argentina. Dr. Kreimer-Birnbaum's background is in biochemistry, genetics, and in health research. She is a Fellow of both the American Institute of Chemists and The Ohio Academy of Science, and is a member of the American Federation for Clinical Research and nine other professional societies. She is Biographee for Who's Who in the Frontiers of Science and Technology and Who's Who in the World. She is author or coauthor of more than 45 publications and has presented or coauthored over 90 technical papers.

12:00 M
Lunch on your own

1:30 PM
Section Business Meetings

2:00 PM - 5:00 PM
Afternoon Technical Section Paper Presentations

5:15 PM
Annual Business Meeting
(for Academy Members only)
University Hall Room 014

6:00 PM
Hospitality Hour
Holiday Inn on the Lane
328 W. Lane Avenue

7:00 PM
Annual Meeting Banquet
(Reservations required by April 12, 1991)
Holiday Inn on the Lane

Sunday, April 27, 1991

8:00 AM - 5:00 PM
Plant Sciences Section Field Trip

The trip will visit the Hocking Hills region of southern Ohio with stops at Conkles Hollow State Nature Preserve and Old Man's Cave -- one of the Hocking Hills State Parks. This area, part of the unglaciated Allegheny Plateau, is known for its beautiful sandstone gorges, glacial relics (e.g. *Taxus* and *Tsuga*), Appalachian species (e.g. *Liriodendron* and *Rhododendron*), and numerous ferns. Collecting is not permitted in the park areas. Transportation will be by car pool and lunch will be brown bag. Meet in the parking lot north of the Botany and Zoology Building, 1735 Neil Avenue. Field trip leader: Dr. John J. Furlow, Supervisor, The Ohio State University Herbarium. For more information phone (614) 292-3296. Please mark the registration form to indicate your intention to join this trip.

8:30 AM

Geology Section Field Trip

This trip will combine a core workshop and visits to bedrock and glacial exposures in the Columbus area. Participants will meet at the Ohio Geological Survey's Core Library where they can examine selected intervals of unique and interesting bedrock and Pleistocene core. The groups will then proceed to excellent exposures of some of the same units seen in core. The first stop will be an impressive exposure of Wisconsinan till at Battelle- Darby Creek Park in western Franklin County. After lunch the group will reconvene at the American Aggregates quarry south of Columbus on Jackson Pike (Rt. 104) to view fresh exposure of Columbus and Delaware limestone.

The trip begins at 8:30 AM at the Core Library, 810 Philippi Road, Columbus, where coffee and donuts will be provided. The group will leave for Battelle-Darby Creek Metro Park at 10:30 AM. Participants must arrange their own transportation. There will be soft drinks at each of the exposure stops, but lunch will be on your own at any of the fast food restaurants close to the trip route. For further information contact: Mr. Mike Angle, ODNR Division of Water, 1939 Fountain Square Drive, BLDG. E, Columbus, OH 43266. Phone (614) 256-6748. Charge: \$3.00 cash at beginning of trip. Please mark the registration form to indicate your intention to join this trip.

Our Host-- The Ohio State University

Ohio State's roots go back to 1870, when the Ohio General Assembly established the Ohio Agricultural and Mechanical College. The new college was made possible through the provisions of the Land-Grant Act signed by President Lincoln on July 2, 1862. This legislation sought to make higher education available to all young people who had the desire and ability to profit from a college education.

Classes began on September 17, 1873. Twenty-four students enrolled for the first day of classes, meeting at the old Neil Farm just two miles north of Columbus.

The college offered seven areas of study--agriculture, ancient languages, chemistry, geology, mathematics, modern languages, and physics. In 1878 the college's name was changed to The Ohio State University. In that same year the first class of six men graduated, and in 1879 the University graduated its first women.

An 1843 master plan proposed a group of buildings around a central open space. By 1901, that space had

evolved into "the Oval," now generally recognized as the center of campus.

A nationally recognized major learning center, The Ohio State University is one of a handful of comprehensive public universities. With a central campus of some 3,300 acres in the state's capital, the University offers a total environment for learning--an eminent faculty, nationally respected academic programs, and excellent facilities.

As a comprehensive university, Ohio State offers courses in the fine arts, sciences, and humanities, as well as in all major professional fields through its 19 colleges, seven schools, the Agricultural Technical Institute (ATI), the Ohio Agricultural Research and Development Center (OARDC), and the Graduate School. Students may choose from more than 200 undergraduate majors and more than 8,000 courses.

Classes are offered at regional campuses in Lima, Mansfield, Marion, and Newark, in addition to the Columbus campus, ATI, and OARDC.

Prestigious faculty and a distinguished research program make Ohio State a principal international center for graduate and professional education. The University grants nearly 44 percent of all doctoral degrees awarded by Ohio's state-assisted institutions of higher education.

Accredited by the North Central Association of Colleges and Schools, the University is a respected member of several other prestigious organizations, including the Association of American Universities, composed of the 58 major research institutions in the United States. Individual colleges and schools also are accredited by their respective professional associations.

Ohio State is among the fewer than 10 percent of colleges and universities to have a chapter of Phi Beta Kappa, the nation's most widely acclaimed honor society. In addition, the University's undergraduate honors programs have served as models for other state universities nationally. And Mortar Board, the senior honor society, has its headquarters here.

Ohio State includes one of the nation's major medical centers; its own airport, Don Scott Field; and a statewide agricultural service through its Cooperative Extension Service.

Through its far-reaching programs in teaching, research, and related public service and through its graduates, Ohio State's vast resources are serving society.

Centennial Annual Meeting Local Arrangements Committee

Dr. Charles C. King, Chairperson
Executive Director
The Ohio Biological Survey

Rosemary Kullman, Assistant to the Chairperson

Julia E. Mills, Conference Coordinator

Local Section Hosts

A. ZOOLOGY

Dr. David A. Culver
Dept. of Zoology

B. PLANT SCIENCES

Dr. Tod F. Stuessy
Dept. of Plant Biology

C. GEOLOGY

Dr. Garry D. McKenzie
Dept. of Geological Sciences

D. MEDICAL SCIENCES

Dr. James S. King
Dept. of Cell Biology,
Neurobiology, & Anatomy

E. PHYSICS & ASTRONOMY F. GEOGRAPHY

Dr. Kenneth G. Wilson
Dept. of Physics

Dr. Michael N. Demers
Dept. of Geography

G. CHEMISTRY

Dr. Carolyn Carter
Dept. of Chemistry

H. SCIENCE

EDUCATION

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College of Education

I. ANTHRO. & SOCIOLOGY

Dr. Krishnan Namboodiri
Dept. of Sociology

J. NATURAL RESOURCES

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School of Natural Resources

K. GENETICS & CELL BIO. L. MATH & COMPUTER SCI.

Dr. Paul A. Fuerst
Dept. of Molecular Genetics

Dr. Charles F. Bender
The Ohio Supercomputer Center

M. PSYCHOLOGY

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Dept. of Psychology

N. JUNIOR ACADEMY

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College of Biological Sciences

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College of Engineering

P. ADMIN. SCIENCES

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Management

Q. ECONOMICS

Dr. Edward Ray
Dept. of Economics

R. ECOLOGY

Dr. William J. Mitsch
School of Natural Resources

S. LIBRARY & INFORMATION SCIENCES

Mr. Bruce A. Leach
Biological Sciences Librarian

NOTES

Special acknowledgement is provided to Dr. John F. Schaff (Chairperson), Ms. Ann Wickham, Mr. Richard Benz, and Dr. Emanuel Rudolph who served on the Centennial Annual Meeting Planning Committee. We also wish to recognize and thank those who organized the Centennial Symposia.